Some data were missing for day 13 and 14 March 2023 respectively. This was updated into the line-list, hence the reason for the change in the epi-curve and the cumulative number of cases.

South Sudan: Cholera Outbreak Situation Report

Situation report: No. 16
Date of onset of outbreak: 22 February 2023
Reporting date: 24 March 2023
Data Source: State Ministry of Health and National Public Health Laboratory

Key Weekly Highlights as of 24 March 2023

- Eighteen (18) new cholera cases have been reported in the last 24 hrs.
- Zero new death recorded in the past 24 hours.
- Cumulatively, a total of 479 cholera cases and 2 deaths (CFR- 0.42%) has been recorded since the onset of the outbreak.
- Overall, 257 (54%) of the cases are males and 222(46%) are females.
- Children of age 1 - 4 years old are the most affected accounting for 296 (62%) of the total cases reported followed by <1 years old 122 (25%).
- Oral Cholera vaccination campaign commenced on 16 March 2023 targeting 53,000 individuals aged 1 year and above in the POC and Malakal town.
- Cumulatively, 43,601 people have been vaccinated (Malakal town and POC) with OCV achieving 66% coverage.
- The current cholera outbreak is localized in Malakal Upper Nile State on the side boarding Sudan.

1 Some data were missing for day 13 and 14 March 2023 respectively. This was updated into the line-list, hence the reason for the change in the epi-curve and the cumulative number.
Key Interventions

Coordination

- National and State Cholera Taskforce continue to meet regularly to provide operational and strategic guidance to the ongoing cholera outbreak response.
- A multisectoral National and State RRT continue to provide epidemiological investigation and technical support to the response interventions in Malakal County.
- A joint supportive supervision by MOH and WHO was conducted to the CTUs/CTCs and OCV Sites. The purpose of the visit is to provide strategic and technical guidance of the response.
- The director of emergency preparedness and response in the MOH has visited Malakal to assess the response interventions and provide support.

Surveillance and reporting

- WHO together with MOH and IOM conducted an active case search in two (2) Health facilities (Warjwok PHCC and Wau Shiluk PHCC)
- During an active case search, one suspected cholera case was found in Warjwok PHCC, and the sample was collected for further testing at Malakal teaching hospital.
- Eight (8) Healthcare workers were oriented in Warjwok PHCC & Wau Shilluk PHCC on Cholera case definitions, and cholera sample collection, and a practical demonstration on the use of RDT.
- WHO and partners continue to update and support data verification, harmonization, and analysis across the response pillars.
- With technical support from WHO, a joint active case search is being conducted by both National and State RRT teams at health facility and community levels in Malakal County.
- Surveillance activities are being heightened in at-risk counties bordering Malakal in Upper Nile State.

Case management

- One (01) new case admitted in the CTU and 17 other cases were discharged.
- MSF is supporting case management at the CTU in Malakal town and POC.
- A technical team consisting of MOH and WHO Country Office has been deployed to Malakal to support ongoing response.
- Rehabilitation of the COVID-19 isolation center (Malakal POC) and CTC in Malakal hospital is ongoing.
- The state ministry of health with support IMC continue to conduct triage in health facilities for cholera and referring cases to Malakal Teaching Hospital.
- The SMOH with support from WHO and partners continue to set up handwashing facilities at established ORP sites in the affected areas.
Training on cholera response interventions rescheduled to 23rd March 2023.
The SMOH with support from WHO continue to preposition standardized Case Management charts and cholera Case Definition to CTUs (HFs, and ORPs and CTUs/CTCs).

**Infection Prevention & Control/WASH**

- Distribution of WASH NFIs which was started on 21 March is ongoing. Some 1,081 kits were provided to 1,081 households estimated to benefit 3,638 individuals (879 men, 1,038 women, 868 boys, 847 girls).
- Hand washing facilities and soaps were distributed to 36 government institutions in Malakal town, 16 points of entry and 4 IDPS sites.
- Training of 7 water operators on water quality testing was conducted with support from IOM lab technicians.
- Ongoing construction of 2 public tap-stand concrete platform with 12 taps at Daniel Comboni IDP Site 1.

**Risk Communication & Community Engagement (RCCE)**

- Community radio talk shows and jingles spots are ongoing.
- RCCE TWG developed a communication plan to guide the implementation of targeted communication activities aimed at changing hygiene behavior and practices for the prevention and control of cholera.
- SSRC has assigned 10 Social mobilizers volunteers in Malakal & POCs in different 5 locations.
- Ongoing daily Hygiene promotion activities on key cholera messages (causes, symptoms, and prevention measures), and airing of pre-recorded cholera preventive measures (Nile FM Radio).

**Laboratory**

- MOH with support from WHO continue to provide orientation to partners on sample collection, filling of cholera investigation forms, and testing using RDT in the affected location and at-risk counties.
- Six (06) samples were collected and aliquots cultured at Malakal Teaching hospital Laboratory will be shipped to the NPHL.
- Twenty-one (21) samples shipped to NPHL.
- Continue monitoring of cultures from previous day and sub-culture of identified to obtain pure culture for identification of pathogens.
- Seventy-four (74) samples have been tested on RDT since the onset of the outbreak with eleven (11) samples testing positive on RDT and sixty three (63) testing negative
- Seventeen (17) samples tested on PCR where four (4) tested positive for vibrio cholerae, 5 salmonella spp and 2 shigella ssp.
▪ 20 samples collected, 3 RDT positive, 15 cultured (aliquots) are being cultured at Malakal Teaching hospital Laboratory
▪ One (01) sample isolate of Cholerae, packaged and to be shipped to NICD - South Africa for further laboratory investigation.
▪ Three (03) lab technicians (1 from NPHL and 2 from WHO) have been deployed to support sample collection and management in Malakal.
▪ Ongoing support to the laboratory capacity of partners (MSF, IOM, and IMC) to conduct RDT for cholera cases.

**Oral Cholera Vaccination (OCV)**
▪ The oral cholera vaccination campaign was officially launched on 16 March 2023.
▪ Some 43,601 people have been vaccinated both in the POC and Malakal town with a coverage of 66% achieved so far.
▪ The OCV campaign will be extended for an additional 5 days to ensure optimum coverage.
▪ WHO submitted a new request of 200,000 doses of OCV to the International Coordination Group (ICG) for additional oral cholera vaccines.

**Logistics and supplies**
▪ WHO hired 2 additional vehicles to support response activities in Malakal.
▪ WHO is dispatching 1 x 48sqm and 1 x 24sqm medical tents to Malakal to support the ongoing Cholera response.
▪ WHO has dispatched additional cholera treatment and investigation kits to Malakal.

**Challenges**
▪ Inadequate access to safe and clean water due to limited WASH supplies.
▪ Sub-optimal risk communication and community engagement in cholera affected high-risk locations.
▪ Inadequate RDT testing of suspected cholera cases at the subnational level, most especially, in health facilities and treatment centers.
▪ Inadequate funding for partners to respond to the cholera outbreak in Malakal.
▪ Lack of designated ambulance to facilitate referral of cholera cases and designated vehicle for the safe dignified burial (SDB) team.
▪ Identification of personnel to be trained safe and dignified burial (SDB).
▪ Overcrowding in the POC due to the continued influx of IDPs poses a major challenge to the limited WASH facilities in the POC.
▪ Inadequate cholera kits and investigation kits for the cholera outbreak response.
▪ Case management charts are in English making it difficult for healthcare workers who only understand Arabic.
▪ Limited security to facilitate the ongoing oral cholera vaccination campaign; the vaccination team were shot at on their way to some hard-to-reach communities.
Way forward

- Translation of case management charts into Arabic language to facilitate easy understanding by healthcare workers.
- Provision of adequate clean and safe water, especially in the cholera outbreak and high-risk locations.
- Enhance cholera RDT testing of suspected cholera cases at health facilities and treatment centers.
- Accelerate RCCE interventions at POC and Malakal town.
- Finalize the cholera response plan and budget for resource mobilization.
- Provide a designated ambulance to support the referral of cholera cases.
- Identify and train safe and dignified burial (SDB) teams.
- Raising the 02 emergency 10M³ Bladder collapsible tank platform- each with mud soil filled in sandbags for 1.5 height to give a good flow of water during fetching.
- Dismantle the existing water supply pipeline at Bam from St. Andrew primary school- Daniel Ccomboni Community tap-stand and reconnect with the same pipeline diameter for good flow pressure at the collection point.
- Training of mobile sanitation community committee on basic sanitation topics and messages prior to general clean-up campaign to maintain clean environment.
- Coordination with MSF on WASH NFI distribution targeting the affected cases after discharge.
- Strengthen the capacity of Malakal Hospital to perform culture and sensitivity of stool samples.

Table 1: Implementing partners by pillar

<table>
<thead>
<tr>
<th>PILLAR</th>
<th>PARTNER SUPPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination</td>
<td>WHO/OCHA</td>
</tr>
<tr>
<td>Surveillance</td>
<td>WHO, MSF, IMC &amp; IOM</td>
</tr>
<tr>
<td>Case Management</td>
<td>MSF, IMC, IOM, WHO</td>
</tr>
<tr>
<td>Water, sanitation, and hygiene (WASH)</td>
<td>IOM, ICRC, WVI, UNICEF, WHO</td>
</tr>
<tr>
<td>Infection prevention &amp; control and Safe and dignified burial</td>
<td>WHO, MSF, DRC, IOM, SSRC</td>
</tr>
<tr>
<td>Risk communication and Community Engagement (RCCE)</td>
<td>UNICEF, IOM/CCCM, SSRC, DRC, WHO</td>
</tr>
<tr>
<td>Port of Entry (PoE)</td>
<td>IOM/DTM, WHO</td>
</tr>
<tr>
<td>Oral cholera vaccine (OCV)</td>
<td>WHO, IMC, MSF- Spain, UNICEF, IOM</td>
</tr>
</tbody>
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For more information, please contact:

Dr. John Rumunu
Incident Manager
E: ori.moiga@gmail.com
P: +211 924 767 490

Dr. Joseph Lasu
Emergency Preparedness & Response Director
E: josh2013_lasu@gmail.com
P: +211 921 395 440

South Sudan PHEOC
E: ssphgeoc@gmail.com
P: +211 925 851 6627/211 917 235 353

Dr BATEGEREZA, Aggrey Kaijuka
WHO-EPR Team Lead
E: bategerezaa@who.int
P: +211 924222030

Editorial team:
MOH: Dr John Rumunu & Dr Jospeh Lasu
WHO: Dr. Bategereza Aggrey, Dr. Moses Ongom, Dr. Mukesh Prajapati, Dr Antonio Oke, Dr Abraham Adut, Dr Mustafa Lasu, Dr Kwaukuan Yealue, Ms Sheila Baya, Malick Gai, Bernard Oduor and Lawrence Mukombo